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ABSTRACT

The most important issue in curriculum development is deciding what learning experiences will benefit students the most in the future. Such decisions should be guided by studying high school students after graduation to determine how they fare in higher education or work and then decide what curriculum changes are necessary. These changes must consider both how well students perform and what will prepare them for the future. But by most measures, U.S. students continue to perform poorly in comparison to students in other advanced nations. Although some question the validity of the comparisons, it is clear that many U.S. schools are failing to educate students. School reform must focus not only on the structure of the disciplines, but on societal and student needs that must be considered through curriculum development. Schools must provide a broader range of educational services to meet social and demographic changes. Curriculum restructuring should include a strong emphasis on the needs of failing students, attention to characteristics of successful adults, consideration of societal trends, and reexamination of how students are prepared for work. Also important are thinking skills, character development, civic responsibility, interpersonal skills, technology-related skills, and appreciation of diversity. (JPT)

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DESIGNING CURRICULUM APPROPRIATE TO THE 21ST CENTURY

Gordon Cawelti

No other topic should be of higher importance to curriculum leaders than deciding what learning experiences are most appropriate to the future lives of their students. Making such decisions involves following up on students after gradation to see how well they fare in higher education or work and then analyzing the changes needed to better prepare students for their multiple roles in the next millennium. In considering such changes we must respond to current deficits in student learning, examine trends detected by futurists, know what attributes characterize happy and productive adults, and make decisions about what schooling should contribute to preparing students for the world of work.

If we just respond to the many critics of education today, we will miss the fundamental issue: What is the relationship between schooling and the kind of world in which today's graduates will be living out multiple roles beyond the year 2000? In planning for changes needed in our system of schooling, however, we must look at how well today's students perform academically.

ARE TODAY'S SCHOOLS REALLY FAILING?

All societies use their schools to transmit their culture or heritage and to foster social mobility. Just what this culture is here in the United States is complex and sometimes more divisive than unifying. But our citizens have always agreed that schooling is the primary means for helping their children get better jobs or enjoy improved social conditions. Many years ago the University of Chicago sociologist Robert Havighurst concluded that about a third of each generation rose at least one social class above that of their parents. Today, however, we are increasingly seeing a generation of youth for whom the prospects of even maintaining the social class levels of their parents is not encouraging.

An even more prominent concern leading to the belief that schools are failing today's youth comes from the repeated criticisms of the students' academic performance. Just as in the 50s and 60s we heard from Arthur Bestor and Hyman Rickover about how poorly U.S. students were achieving compared with students in other countries, the current reform movement has been sustained by the poor showing of U.S. students in international test score comparisons. Each year the decline in Scholastic Aptitude Test scores is interpreted by critics as symbolizing the decline of American education. Several times each year, the test scores of the National Assessment of Educational Progress (NAEP) buttress the public impression of low performance and the failure of schools.

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Further evidence of this failure is the dropout rate, which signals the inability of schools to interest sizeable groups of students in learning or in perceiving learning as valuable.

During the past year, several "revisionist" scholars have examined these oft-cited data criticizing the schools and have reported that U.S. schools may, in fact, not be doing a poorer job than they did in earlier years. The poor showing of U.S. students in international test score comparisons is now said to be attributed to using very different samples of students in the testing. For example, in Europe approximately the top fourth of the age group attends high school, and a sampling of these test scores is compared with scores in the United States, where three-fourths of the age group was sampled.

If we examine these new interpretations carefully, we can perhaps conclude that the performance of students in U.S. schools is about as good as it ever was. Despite these more recent interpretations of well-known data, few would dispute that some schools are utterly failing significant numbers of students. Even more important, reliance on such test data alone tends to ignore the question of whether today's classrooms are providing the learning experiences that are most appropriate to the future lives of their students. The issue is not so much whether schools are as good as they ever were, but whether student performance is on the right curriculum and good enough for the future.

The repeated criticism of schools has taken its toll in that public confidence in schools in general has dropped, and citizens are increasing unwilling to adequately support education. Any school's plan for the future must include designing research-based interventions to improve student achievement on significant outcomes. Our society will not be well served if we do not respond to those legitimate priority concerns for eliminating deficits in student learning in basic skill areas.

DECIDING ON A CURRICULUM APPROPRIATE TO THE FUTURE

Beyond developing plans to help students achieve much higher levels of performance on traditional academic fare, we should expand the fundamental curriculum to contain include attention to societal needs, the needs of human beings, and the structure of the disciplines. Political approaches to school improvement, such as President Bush's America 2000 plan, with its attention to national standards and testing in five subject areas, focuses primarily on the structure of the disciplines. Curriculum planners must balance this attention by assuring consideration of societal and learner needs.

Social Concerns and Futures

The work of popular futurists like Alvin Toeffler or John Naisbitt tends to concentrate on social and economic trends, such as the changing workplace, the impact of technology, governmental policy shifts, and increasing interdependence among nations (see Naisbitt and Aburdene 1991). The prominent demographer, Harold Hodgkinson, has made a significant contribution to curriculum planning by describing the implications of shifts in the country's demography. For example, the social costs will be enormous if we do not respond better to the needs of single-parent families, increasing numbers of immigrants and minority children, and an ever expanding number of senior citizens. Clearly, changes in the typical American family structure call for public schools to provide a broader range of educational services. The futurists were among those who early pointed out the shift from an industrial society to one in which most jobs would be in information and service.

Predictors of Adult Happiness and Success

Another source of ideas for planning curriculum changes is exemplified by the longitudinal study of successful adults by Douglas Heath (1991). Following a group of men and women from high school into their mid-40s, Heath carried out extensive interviews and administered tests and questionnaires to ascertain what attributes characterize adults who are happier and more successful than the population in general. His major findings suggest that more successful adults are psychologically more mature and more adrogynous (i.e., are not limited by traditional sex roles) than adults in general. These two attributes prove to be the best predictor of adults who are happy and successful. What are the implications of this finding for the curriculum?

Heath's research also confirms that the school's role in developing cognitive skills is highly important, and this is where schools have traditionally spent most of their instructional time. But his findings also reveal that happy and productive adults possess good interpersonal skills, including sensitivity and empathy for others and the ability to engage in cooperative work. They have a strong value base upon which their priorities and actions are established. Successful adults also possess accurate self-insight into how other view them and what their own capabilities are. Heath tends to focus on the importance of developing character in students, including such attributes as caring, integrity, respect, openness, honesty, and adaptability.

Societal Values

The fundamental values of a free society need to be taught including such concepts as the public good, individual rights, justice, equality, diversity, and patriotism. Learner outcomes

that address the issue of civic competence are perhaps as important to the well being of future generations as the content of history or government itself. One document, the CIVITAS report (Bahmuellar, 1991) is absolutely essential in planning to seriously purse student outcomes relating to civic competence. The CIVITAS report provides a comprehensive framework for knowledge and skills in this area.

Schools that have engaged in futures planning invariably come to the conclusion that character development and civic competence are essential because of the diminished importance of many traditional institutions in the lives of today's youth and continued indicators of decay in the moral fabric of our society. Clearly schools must focus both on academic outcomes and character development if we are to maintain and perfect a free society.

Preparation for the Workplace

A final issue in examining sources for changes needed in the curriculum centers our lingering ambiguity over what contribution schooling can make in preparing students for the work world. Because only about half the high school graduates go on to college, and this same ratio prevails for those who start college and those receiving a degree, the issue cannot be ignored. The broader societal issue here is the declining competitiveness (not productivity) of the United States in the international trade arena and what can be done about it. Many of the non-college bound population of students are not motivated to do well in school because employers have not made clear what skills are needed for a competitive work force in their enterprise, and have not required the graduate's credentials before employment.

Many argue that the schools ought not to be concerned with workplace skills and instead should concentrate on providing all students with a strong general education. This tendency to disavow responsibility for work preparation is strengthened by arguing that bad management of the workplace is the principal cause of declining U.S. competitiveness. It is true that only a few companies have successfully transformed their operations or services to a point where workers themselves have assumed a major responsibility for improving the quality of their products or services.

Some vocational programs in the high schools prepare students for specific jobs such as in electronics, automobile repair, or secretarial positions. Although placement is often high for some graduates with these skills, for many of those enrolled in other courses, vocational education is a dead-end career path. The newly developing "Tech Prep" program features cooperation between high schools and community colleges in preparing students for jobs that are known to exist.

But, schools historically have not expressed a strong commitment -- or goal statements -- in their mission for preparing students for work and, in actuality, serve only a small proportion of those needing preparation for work. The issue of the school's role is being increasingly pressed by the corporate community so that states such as Oregon and California are considering or are moving toward clearly delineating different tracks for students: those going on to higher education and those planning to enter the work world.

In America's Choice: High Skills or Low Wages, the Commission on the Skills of the American Work Force (1990) states "America may have the worst school-to-work transition system of any advanced industrial country." (p. 4).

The commission studied "high performance workplaces" around the world and concluded that only about 5 percent of America's companies can be so classified, -- and that others need to make this transition if they are to become more competitive. The transition involves training workers to assume more responsibility for using judgment and making decisions on the front-line.

This report recommends that new educational performance standards be established nationally; and if students reach these standards by age 16, they would be awarded a Certificate of Mastery. Employers would be asked to cooperate by not employing students unless they have earned this certificate. This report carries the message that our country will decline in competitiveness and be a low-wage society unless changes are made in the system to produce a higher quality work force.

Another source for considering the school's role in work preparation is the U.S. Department of Labor's latest "SCANS" report. (Secretary of Labor's Commission on Achieving Necessary Skills 1992). Learning a Living follows up on the recommendation to establish standards for the knowledge and skills reported as most needed in the workplace. These were also derived by asking employers in high-performing workplaces what kind of workers were needed to be competitive in their markets. The SCANS recommendations call for setting high standards in what are called foundation skills: basic skills, thinking skills (ability to reason, think creatively, and solve problems), and personal qualities (responsibility and integrity).

The other competencies recommended in the SCANS report include: (1) interpersonal skills, such as working on teams; (2) understanding how systems work and can be improved; (3) knowing how to allocate resources such as time, money, space, and staff; (4) having skills in using computers to organize and retrieve information; and (5) knowing how to select, use and maintain technological tools.

Because these are less conventional competencies, and there are no "courses" on these skills, it is recommended that they be integrated throughout the K-12 curriculum. The systemic change that is envisioned would provide greater motivation for students to excel by establishing clear standards of accomplishment that prospective employers would require, resulting in a far more effective transition from school to work.

IMPLICATIONS FOR STUDENT LEARNER OUTCOMES

Curriculum planners must rely on societal and learner needs, in addition to the structure of various disciplines, in articulating student learner outcomes most appropriate to the multiple roles students will play in their adult lives. Plans for restructuring the curriculum should include (1) serious and sustained attention to the substantial deficits in learning currently experienced by some students, (2) attention to those attributes describing adults who are lead productive and happy lives, (3) careful consideration of the consequences of societal trend lines that are forecast for the future, and (4) a re-examination of instructional policy on preparing students for the transition from school to work. Reform activities are currently preoccupied with strictly academic standards, and the judgment of scholars in setting content standards is very much needed. But the larger responsibility of the schools for addressing human and societal concerns must be balanced with attention to academic achievement.

Many schools are well along in planning for the kind of learner outcomes that reflect these multiple sources of information pertinent to the future. When parents, teachers, board members, and corporate leaders engage in such planning, there is a good deal of similarity among the outcome statements produced. As an example, Figure 1 shows the graduation requirements that will be implemented in the Littleton High School, Colorado, beginning in 1995. These were derived after two years of study and were ultimately agreed on by the faculty and board of education as the framework upon which assessment plans and standards would be based. These are similar to outcomes established in several districts where student performance is replacing "seat time" as the basis for graduation.

Several observations can be made about this curriculum restructuring. The outcomes reflect a more balanced program of general education requirements than in the past, particularly because the arts are included, but also because direct instructional attention is given to outcomes relating to human and societal concerns. Examination of newly emerging learner outcomes from several schools reveals the following pattern of outcomes:

Figure 1

LITTLETON HIGH SCHOOL GRADUATION REQUIREMENTS, 1995

COMMUNICATION:	• Speaks and writes effectively • Reads and listens actively • Speaks a foreign language
COMMUNITY INVOLVEMENT:	• Has actively contributed to a community and service organization
CONSUMER ECONOMICS:	• Understand nature of economics as applied to daily life
ETHICS:	• Understands importance of ethical conduct
CRITICAL THINKING:	• Uses research and problem-solving processes to make critical distinctions/decisions
HUMAN RELATIONS:	• Interacts well and works cooperatively with others
LITERACY ARTS:	• Reads and evaluates literature
MATHEMATICS:	• Applies math principles to solve a wide range of problems
PERSONAL GROWTH:	• Evaluates his or her own goals and demonstrates self-discipline
THE SCIENCES:	• Applies skills and scientific concepts to explain henomena, find solutions to problems
PERSONAL HEALTH:	• Implements a plan for physical and mental health
SOCIAL AND WORLD RELATIONSHIPS:	• Uses knowledge of past to explain the present and anticipate the future • Applies physical and cultural geography to understand societies • Understands structures and operations of government in the United States
TECHNOLOGY:	• Demonstrates a practical knowledge of tools and technological systems now in use • Demonstrates awareness of the environment as affected by technology
VISUAL/ PERFORMING ARTS:	• Participates in and is aesthetically aware of the visual and performing arts

1) development of **thinking skills** such as problem-solving or critical thinking

2) **character development,** ethical conduct or moral education

3) demonstrating a sense of **civic responsibility**

4) developing **interpersonal skills** such as working cooperatively with others

5) skills in **selecting and using technology** and understanding the societal effects of technological advances

6) developing a better understanding of the **value of diversity** in people and an international perspective among students

These learner outcomes are cited because they tend to be derived from societal trend analyses and are increasingly recognized as essential to the future lives of students. Citing them here in no way diminishes the importance of more traditional academic outcomes which are also being more clearly articulated as expectations for students. While to some schools these outcomes are not particularly new, they will mean new learning experiences being generated for all students because performance assessment measures are being simultaneously designed.

Most of these general learner outcomes can only be accomplished only through a much more integrated curriculum than we now have, but the novel forms of assessment being developed will help ensure that students are proficient in what they are expected to know and be able to do. It needs to be recognized, however, that such a measurement-driven strategy alone will be insufficient to enable teachers in differing subjects to actually use this integrated curriculum. The school organization needs to be restructured to provide for teacher-led planning teams to meet regularly and carry out a comprehensive design for curriculum integration.

The American people expect a great deal out of their schools, including opportunities for social mobility, better jobs, and satisfying lives. They look to schooling for help in improving conditions for their families in the future, and curriculum leaders must continue their quest for producing knowledgeable students who will become productive citizens who care for their fellow human beings. Herbert Spencer put it well when he said: "No one can be perfectly free till all are free; no one can be perfectly moral until all are moral; no one can be perfectly happy until all are happy."

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